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ABSTRACT

This paper explores the relationship between university-based professional education and society as viewed by the architectural profession. The problem under investigation is the extent to which university-based professional education has become disjointed and more university-referential, less interdependent, and less interactive with society, and how the connections between education, practice, and society are put under stress. First, the report presents an overview of the history of the architectural profession, its education, regulation, standardization, and its evolvement to being more attentive to specialized educational concerns versus professional preparation. Next, the current issues between architectural education and the profession are examined from the perspectives of university students, faculty, administrators, and practicing architects. Finally, the report discusses ways to improve architectural education and professional preparation stressing interdependent endeavors between academia and the profession. Contains a 36-item bibliography. (GLR)

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Interaction and Interdependence: University-based Architectural Education and the Architectural Profession

JOSEPH BILELLO

Introduction

"Every child knows the secret to life," according to August Coppola, Dean of San Francisco State University's School of Creative Arts. "The secret is that you can't tickle yourself." We are both independent and interdependent beings. However, in our emergence from dependence, we usually reaffirm our independence and disregard our interdependence.

The emergence from the university into professional life is a significant landmark in the establishment of an individual's independence. Scholars concur that achieving independence has been a significant element of the American middle class's collective effort to define and advance itself (Bledstein, 1978, Larson, 1977). As a consequence, interdependence becomes a silent partner to self-interest in the university and in American society. The deteriorating conditions of our environment bear painful witness to the absence of interdependence. However, it is integrative acts and people that are critically important to promote broad understanding during the increasing differentiation of acting independently.

The university is caught between its need to reflect society's values and its desire to illuminate new directions. Today, the overwhelmingly dominant drive to illuminate may be creating significant imminent problems for some professional education programs and their professions. The predicted consequences of new changes afoot in universities' professional schools of architecture are disturbing to professionals and experienced academicians alike. Perceptions of disjointedness between education and practice frequently characterize their writings (Albrecht, 1990, Beckley, 1989). Academic theorists are producing self-referential architecture. Architectural research is done without expectation of transference into practice. Notably, this disjointed condition seems to be chronic, with a long history substantiated in the periodic literature. One may make several assertions about this dislocation. It may be a condition not remediable or even worsening. One may also assert that as universities have matured into astute economic entities, their products have become more university-referential and less societally-referential. Or it suggests that chronic tension between education and practice is at this time and under these conditions, "the nature of the beast." At its best, it is a creative tension natural to interdependent systems, like professions and professional education are. However, its naturalness is seemingly alien to increasingly fragmented and specialized professions and their practitioners. Today, the need to realize and value interdependence in society at large (for example, in environmental issues) and specifically among constituents of professional education cannot be overstated. To substantiate this claim, this essay will explore a small part of the relationship between higher education and society; that of architectural education and the profession it serves, which are my own disciplinary and professional backgrounds.

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The Architectural Profession and Education: A Brief History of Interdependence:

Apprenticeship: The American architectural profession is relatively young. Architectural education is even younger. During the middle 1800s the profession began to grow noticeably with the rising need for substantial buildings that accompanied increasing concentrations of capital in church, government and industry. During the late 1800s, professional education likewise began to grow to meet the rising American middle class drive to acquire via expertise. (Weatherhead, 1941, Bledstein, 1978). During the 19th century, becoming an architect in America was relatively simple. One simply hung up a shingle to indicate that one was an architect. Like other professions, quackery and illiteracy were rampant. If one had any preparation, it was usually as an apprentice. With time, apprenticeship became formally structured with strict rules and regulations, particularly for the apprentice. For many, it provided little if any preparation to be an architect except that which one could assimilate from the master's behaviors and predilections. Most architects had neither inclination nor ability to effectively train. On the other side, apprentices usually had poor, if any, previous education and were typically inept both before and after apprenticeship (Bledstein). Scholars regard the relationship as more like mutual parasitism than symbiosis.

Clearly, there were exceptions. Fine architects were often educated in Europe at the academies in Paris or their counterparts, the polytechnics in Germany and England. Exemplary practices produced a lineage of architects responsible for most of the historic institutional buildings still standing. Architects educated in Europe returned with models for education and training as well. The most significant was the French atelier system that enabled groups of young men (and, in rare instances, women) to pool their resource, rent space, and hire an architect to oversee their professional preparation (Chafee, 1977). In America, ateliers sprung up in major cities where there were European educated architects. Often, those who were apprentices by day, were atelier students by night (Mead, 1986). Atelier training remained a small movement well into the 20th century, however apprenticeship training dominated professional preparation. The 1900 census shows 10,000 architects, almost all uneducated, except for apprentice-training (Bannister, 1954). Ultimately, the shortcomings of the apprenticeship system compounded by the drive of the rising middle class for professionalism through education, lead to a new order of interdependence. Through education and implicit expertise, one could claim the semblances of status, compensation and independence.

Education: Attempts to begin architectural education in the 18th century through the middle 19th century met with failure. Attempts by Thomas Jefferson and others faded for lack of funding and/or sustained interest. Similar to other "would-be" professions, the architectural education breakthrough resulted from two major landmarks. First came the creation of the profession's organization, The American Institute of Architects, founded in 1857. Part of its original mission statement addressed the need for architectural education (Saylor, 1957). Second, the Morrill Land Grant Act (1862) enabled the establishment of the first architectural schools. During this first quarter of its history, American architectural education yielded only a handful of architects. However, a new interdependence between education, the profession, and society was being created.

Regulation: Like other professions, real institutionalization of the profession and education came with government regulation. Following the institutionalizing of building codes and licensing (beginning in Illinois 1874 and 1897 respectively), examination for licensure was added, further

necessitating the education link. Gradually, preparatory education and training requirements became mandated on a state-by-state basis. Regulation provided the second precursory condition of interdependence. It differentiated those who have "the right stuff" from those who don't.

Schools themselves introduced regulatory features to preclude government alternatives and to define the profession themselves. The Association of Collegiate Schools of Architecture (ACSA, 1912) was created to enable a structured dialogue that loosely functioned as a self-monitoring among the schools. It also marked a point in time at which the needs of practitioners and educators in schools were significantly differentiated thereby adding another dimension of the interdependence matrix. Comprehensive discussion had begun among a new element of the profession, the administrator-scholars.

Standardization: Although the earliest schools were an eclectic collection of sometimes pragmatic, sometimes European model institutions, their early 20th century counterparts were increasingly standardized. By the 1920s, self-regulation had turned to national standardization. The Standards Minima provided design competency thresholds that every student was required to cross (Bannister, 1954). Scholars assert that this standardization enabled the schools to provide an agreed upon body of knowledge. Further, it formalized the profession and differentiated its ethics and products from those of engineers (Weatherhead 1941, Larson 1977). These self-regulatory efforts followed those in other professions. The Flexner Report (1910) and the Reed Report (1921) served to self-regulate and clarify medicine and law respectively. In 1929, they were followed by A Study of Architecture Schools 1929-1932 (Bosworth and Jones, 1932), the first state of architectural education report. Successes in consolidating professional education enjoyed by medicine as a result of the Flexner Report were not however shared by their law and architecture counterparts (Thorne, 1974). In architecture, however, it did point to an increasingly apparent class structure in the schools coinciding with a growing disparity of resources. Shortly thereafter, in 1940, the National Architectural Accrediting Board (NAAB) was founded jointly by the ACSA and AIA to maintain minimum thresholds for schools as legitimate enterprises in the preparation of architects. During this time, the interdependence of professional education, the profession, and society was most apparent. Standardization directly responded to the profession's needs for a monopoly of competence within a body of knowledge (Larson, 1977). It responded to architects' clients' needs for institutional forms. And it served professional education's needs for legitimacy.

Neither this body of knowledge nor the linkage has endured. Challenges to ideologies, aesthetics, and technology have paralleled challenges to its government and corporate clientele. However, those changes did not correspondingly yield greater interdependence.

Differentiation of Education and Training: After the Second World War, new distinctions occurred to challenge and redefine the interdependence. A differentiation between training and education begins to appear in the profession's literature (Cellarius, 1946 and Bannister, 1954). Increasingly, the mission of professional education was underscored as education not training. Technological, behavioral, and environmental understanding by the architect were connected by influential educators to beliefs that architectural education should be a graduate education (Geddes and Spring, 1967). Today, half of the ninety-four accredited schools offer graduate degrees instead of (and in some cases, as well as) undergraduate professional degrees. The profession's reactions have shown considerable ambivalence (Green, 1987, Fisher, 1989).

Through self-regulating entities like NAAB, architectural education has defined itself more clearly by adding more and more evaluative criteria by which programs are judged. Those differentiations may have created attention to specialized concerns to the detriment of professional preparation. The tension between those who favor more architecture specific subject matter and more culturally diverse materials goes unreconciled. It is clear that interdependence is clouded by differentiation. Connections between education, practice and society are put under stress.

Current Issues between Architectural Education and the Profession

Practitioner, educator, and student perspectives on their interdependence are increasingly colored by distinct and different pressures. Each responds to internal and external environmental pressures in their own domain. However, with the exception of the very small number of crossover practitioner/educators, few are sensitive to the pressures of the other's environment.

Perspective from the University: Students Transitions from education into professional life are often characterized by stresses. Graduates often experience "reality shock" on leaving the academy, an unhealthful and negatively formative period in professional life. For example, the clinic is a distant simulation of the way in which most doctors practice. Scholars report significant disjunction for many graduates upon becoming practicing physicians (Thorne, 1974).

The transition from architectural education into architectural practice is no exception. Students enter professional architectural education for reasons stretching from the pragmatic to the poetic. For some, it may be disciplinary liberal arts study. However, for the majority, it is an acquisition of learning to become an architect. The transition into the culture is difficult for most. The discipline is labor intensive and rigorously critical. It is also very long relative to the anticipated compensation. For many, getting a first job is a trauma. The values of their education are often difficult to transfer into more pragmatic practice settings. Those who find work while still students often question their curriculum and its ability to enable them to prepare for the profession. The design studio at the heart of the education bears little relationship to the realities of practice (for example, the hierarchical decision-making structure and teamwork of professional practice). Many ask, "is it worth it?" Compensation seems remarkably low compared with the risk and cultural value of the work. The construction cycle creates great fluctuations in prosperous and lean years. The actualities of practice are often pedestrian compared to the lives of the profession's heroes whom students try to emulate.

Perspective from the University: Faculty Architectural education is subjected to university pressures which have become increasingly distinct. The uniqueness schools reported to enjoy is disappearing (Steward, 1988). Within both public and private comprehensive research institutions, where most schools and colleges of architecture are housed, the priority is often first research, then teaching, and finally community service. Today, those priorities drive architecture departments toward hiring, promoting, and tenure priorities new to the discipline and to their programs. Never before has funded research been such a compelling factor (Steward, 1986). Tenure-track faculty restrict their attention to tenurable activity, research and publication, at the cost of concentrating on the classroom. There are increasing pressures caused by the numbers of non-architects on the faculty, particularly those who engage primarily in research. Often, they argue that architecture is a first a discipline for all architectural education students and afterwards a profession for those who choose it. This distinction between discipline and profession is neither

understood nor embraced by the profession. For them, the practice of architecture is the discipline.

From the profession's point of view, it is regrettable that the emphasis has not been on more effective teaching (Bilello et al., 1989, Fisher, 1989). A prominent Ivy League school's dean reported that being called a good teacher at his school is "the kiss of death." Like other professions, architecture has historically been a practice-based discipline, not a research-based one. Formerly, faculties would include a number of pragmatic practitioners who task it was to enable students to become architects. They are a disappearing breed. In their place, those with publication and research interests are appearing. This raises significant questions about the net effect upon future practitioners. Will a research faculty be able to do its part in professional preparation, a primary mission of the schools? Or will a research faculty forward a set of values that will undermine links? A pathological model would suggest a net negative effect. However, others view the transition of the profession into a knowledge-based profession as a necessarily painful one (Bilello et al, 1989).

Perspective from the University: Administrators The Administrator's perspective may be the most problematic. Pressures for enrollments vary greatly. In many institutions, program budgets are directly related to full-time equivalent student numbers. Architectural education was at the top of list for those seeking professional education during the 1960s and 1970s (Larson et al, 1983). Still today, many competitive schools turn away all but the best students. Others have open access policies and still cannot fill their programs. When they do, the problem of remedial education can be paralyzing. The movement into graduate education has been particularly problematic in remote areas. In general, architectural faculty are hard-pressed to attract research funds. Likewise, their schools are hard-pressed to attract graduate students without offering extraordinary financial incentives. For most, those incentives do not exist. University pressures to increase minority enrollments have other problems. Minority students have little if any guidance counseling that would lead them to even consider careers in architecture (Knight). Further, the culture of architecture school is relatively closed and often perceived as inhospitable to minorities (Grant, 1990).

There are pressures to attract and keep good faculty. Many non-urban institutions have particularly acute difficulties, especially if there is no opportunity to design buildings. During the top half of the construction cycle, it is difficult to attract practitioners. Compensation may be attractive to junior design faculty but not attractive to technology and specialist faculty. Getting tenure approval for fine teachers without research and publication drives is fraught with dilemmas.

Department chairs are subject to the pressures of internal factionalism in the faculty between practice and theory faculty and among each of those groups themselves. Part-time faculty are often desirably profession-oriented and are relatively inexpensive. However, they are generally inaccessible to students after class hours. Full-time faculty are accessible, but may have higher priority commitments with research, tenure-related activity, committees or in some cases professional consulting.

Often the university views architectural education as relatively inefficient because it is a space intensive program (75 square feet per student instead of a standard 10 square feet in a lecture hall). The competition for funds usually favors those without time and space intensive demands. External fund raising demands are rising. For many it takes upwards of 50% of their time.

There are pressures to move programs from undergraduate to graduate degrees. Not only are they driven by the research agenda, they are also driven by the realities of universities' full-time enrollment dollar allocations that favor graduate education. Serious consideration is being given to consolidating the degrees into a single degree that all schools would award: the doctor of architecture. For some, the current demands reflect the years of education for which other disciplines award a doctorate. For others, credential parity in the university is the crucial issue. Nonetheless, both distinctions are lost upon architects in general. "Will this needlessly eliminate those who can only afford five years of education? Will I have to pay more for interns?" and questions of this type are most typically raised.

Finally, there are continual pressures from the profession itself; pressures to make the institution increasingly profession responsive.

These internal university pressures dominate the attention of architectural administrators. They are pressures which are increasing with the university-wide drive to attract resources, to build its "reputational capital" (Mayo, 1988) and to maintain fair and equitable standards for hiring, promotion, and tenure. To mediate these pressures, effective administrators are keenly aware of their interdependence. They act to leverage their activities with integrated purposes and multiple objectives so that all constituencies share some satisfaction. Internal pressures have been accompanied not only by external professional pressures, but also by state and federal regulation and resources. Government, higher education, professions, and society have become four interdependent and sometimes strange bedfellows.

The Perspective from the Architectural Profession: By its nature, the architectural profession has been tethered to the building industry, business world, and the arts. These influences have had various impacts upon architects and the preparation to practice. They not only shape practice, they shape how architects view education and the preparation it should be providing tomorrow's architects. Historically, as well as providing a body of knowledge for the profession, the early 20th century interdependent architectural education indirectly met the needs of rising capitalist and government institutions. By promulgating an architectural language, architectural education helped substantiate and maintain the significance of these same institutions. (Weatherhead, 1941). Today, the indirect pressures may remain but the styles have changed and the issues with them. Business development, risk management, and greater accountability increasingly permeate this formerly artistic profession. The economic pressures on most architectural firms drive them to view training obligations, and in some cases, remediation of new graduates, as a liability. Therefore, formal training is often undertaken with considerable reluctance, if at all. Neither architects nor their interns typically expect a long term relationship. Interns habitually look for better opportunities. Anticipating this opportunism, architects usually exhibit an unwillingness to make an investment. Both students and interns find themselves caught in the middle when the interdependence of educators and practitioners is imperiled.

Frequently, architects who hire graduates talk about the need for better prepared graduates. The meanings of a better prepared graduate vary from the beneficent to the exploitative. The variance is often attributable to architects' reactions to graduates who seek work with them. Exciting and challenging work attracts like-seeking graduates. Unfortunately, a significant proportion of the profession is not graced with either this work or disposition. It is here that interdependence has some of its greatest tests. However, there is discernible agreement among practitioners and educators about some characteristics of the better prepared graduate: better

communication skills; better understanding of the relationship between drawings and constructing buildings; a sensitivity for more pressing issues in practice; and a commitment to lifelong learning (Bilello and Lutes, 1990).

Architects are subject to pressures to specialize and to "niche market". Their views on the question of generalist versus specialist education would seem to suggest similar sentiments. However, despite their own environmental pressures, they largely believe that a generalist foundation is imperative. In contrast, some faculty, particularly graduate faculty, argue for a specialist education (Wendler, MacGilvray, 1988).

The profession is deeply concerned that practitioners teach in the design studio. In architecture school, the studio is the center for inquiry as well as the nearest simulation of practice. Those who teach but have not practiced, often teach design from a theory base which may or may not have transferability for the student in the world of constructing buildings. Most believe that the first mission of the schools is to produce bright people who communicate and think well, are easy to work with, devoted to the mission of architecture, and are sensitive to the needs of the practicing profession (AIA, 1986). Those demands are intensifying, and as a consequence so are the bands of interdependence being stretched.

Interdependence and Sustained Action: Towards a Healthful Profession

Interdependent systems can be viewed as either pathological or as fundamentally healthful (Walker,1989). Those engaged in professions or working with them are familiar with their shortcomings and may interpret them pathologically. Others have discovered their professions as potentially healthful systems, marked by an interrelation of their parts which nurtures all that participate.

In its projection of trends impacting the architectural profession in the 21st century, fourteen major areas were distilled (Exhibit 2). Collectively, they represent societal challenges which no independent individual will be able to meet. No profession divorced from its education will be able to meet them either. A comprehensive matrix of the existing interdependencies demonstrate what is already occurring both formally and informally (Exhibit 1). It only begins to suggest the rich tapestry of interactions that constitute architectural education and practice today.

Interdependent activity clearly provides easier access to vital information for students, educators and practitioners alike. New knowledge resulting from architectural research needs to be more readily transferred into practice. In that way, practitioners can begin to address these myriad demands society is placing on architects. A joint practitioner/educator research council has been established to enable this transference. Vehicles like it should enable a vital service for those who value the most current information and who understand and thereby profit by interdependence.

As job demands intensify, empathy may be lost for the demands placed on others. Promoting dialogue can and often does eliminate misunderstanding. Through dialogue, the profession helps university leadership know how vital it is for architectural faculty to include practitioners to effectively prepare future architects. Dialogue enables consensus on what a "better prepared graduate" means to practitioners and educators alike. Dialogue enables educators to clearly understand the needs of the profession and conversely enables practitioners to understand the

context and needs of architectural education. Interdependent activity enables effective decision-making. By addressing all concerns and objections, consensus-building avoids alienation or estrangement of those impacted by decisions. Instead, an informed empathy is bred and new opportunities can be realized.

Third, and likewise similar, interdependent activity enables the possibility of positive change. There is far greater likelihood that the needs of the schools, the profession, and society can be met if efforts at change are coordinated with educator and practitioner input and representation. The futility of "town and gown" rhetoric that often characterizes the profession's history is documented in both professional and academic literature. In contrast, interdependent activity enables symbiotic solutions to perceived problems.

Among architectural education's constituents, interdependence begins at both national and grassroots levels. At the national level, it occurs among architectural education's collateral organizations. A task force of organization presidents is doing the seed work for a study on architectural education and its relation to the profession, the first of its kind in over twenty years. The last study had a significant impact on education and the profession. The current work promises to forward an agenda of topics which the organizations agree need to be addressed for the study to be meaningful, and demonstrate their interdependence. Similarly, endeavors to provide information about being an architect for secondary school students and other prospective architects is provided by the Architectural Career Advisory Council, composed of representatives of each organizations. The American Institute of Architects, the professional organization, has endeavored to build bridges raising a sense of interdependence among its aforementioned constituents. Its multi-year Architectural Education Initiative enables cooperative endeavors between educators and practitioners for the purpose of promoting excellence in architectural education.

Individual architects were founders of the National Architectural Accrediting Board. Today, with students and educator counterparts, architects govern the accreditation organization and lead accreditation visiting teams. At their best, their intent is to promote excellence in architectural education and powerfully demonstrate the interdependence of architectural education and practice. Of 3500 faculty in schools of architecture, nearly 1000 are registered architects who teach. Many serve on numerous joint task forces on the profession's education policies, joint research, continuing education, effective pedagogy, and effectively using offices as learning environments. One on-going program, The AIA Institute Scholars Program has enabled collaborative faculty/practitioner research endeavor. Another, The Walter Wagner Education Forum, provides a setting for student, practitioner, and educator to debate issues of shared concern. A committee of architects in education provides regional and local forums for similar dialogue. A group steering the professional organizations educational relationship is composed of practitioners and educators who together forge a clear agenda of the profession's needs from architectural education. Faculty pedagogy of distinction to the profession is published in a profession-sponsored monograph focussed on excellence in architectural education. Thus, at a national level interdependent activity is readily evident and holds the promise of substantive results.

At the grassroots level, there is corresponding interdependent activity. In some regions, architecture school leadership serves on the professional organization board of directors. In many locations, architects donate time and participate at reviews of student work, as lecturers, and

mentors. Local chapters of the professional organization link with educators at all levels. Environmental education programs enable primary and secondary school teachers to meet with architects to create inspirational programs for children. At "career days", architects and educators inform high school students and parents in many major American cities. Mentorship and "getting a job" programs are similarly offered to architecture students.

These efforts to build bridges among those with a commitment to architectural education and its relationship to practice are actually small in scale and played out on uneven terrain. There are localities where a polarized atmosphere remains. This is particularly true in urban areas. Often, the collegiality enjoyed in the single school/single state relationship does not exist in multiple institution localities. Some regard this as the creative tension which is the natural result of the critical nature of the academic enterprise and the entrepreneurial nature of practice. To affect interdependence, it is crucial for all to clearly articulate not only their concerns but proposed remedies to affect change. The most vexing problem is to get those who have identified problems to actively commit time to their remedy. Many practitioners agree that it is important that more become active at schools of architecture. It is equally important that they open their office doors for educators with opportunities in architectural offices.

Professional preparation is a shared responsibility involving both education and training in both the schools of architecture and the architectural office. When surveyed, most architects indicate that they believe they share this responsibility. Truly committed architects and their counterparts in education integrate the equally important empowerments of education and training. Endeavors are successful where students, faculty, administrators, and practitioners benefit, where dialogue enables consensus, and provides both problems definition and alternative solutions.

Conclusion

There are now 85,000 registered architects, 35,000 students and 3400 faculty. The interdependent endeavors presented in this essay represent the participation of only two percent of those affected; far from the critical mass necessary to make substantive change. Until a critical mass of stakeholders in architectural education understand their interdependence and participate actively to create value, the general perception will be that no difference is being made, fragmentation is accelerating, and dislocation is inevitable. The interactions cited suggest that there is a growing realization that actively creating, developing, and maintaining interdependence is crucial for the profession's future. The rapidly increasing demands enveloping the profession now will characterize the profession during the professional lives of today's students. Myopic independent behavior disserves society and the other constituents of architectural education. Beyond tickling ourselves, interdependent activity is an act of nurturing.

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